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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/507,019

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Tsunchisa Sanagi

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EXAMINER

NALVEN, EMILY IRIS

ART UNIT

PAPER NUMBER

3744

MAIL DATE

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05/12/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/507,019	Applicant(s) SANAGI, TSUNEHISA	
	Examiner EMILY I. NALVEN	Art Unit 3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Receipt of Applicant's amendments filed on Feb. 4, 2008 is acknowledged.

Claim Objections

1. **Claims 2, 4-7, 9, 11-12 and 18** are objected to because of the following informalities:

In regard to claim 2, the recitation "an electric motor" (line 8) is presumed to be -- said electric motor -- to further clarify the limitations of the claim.

In regard to claims 4-7, 9 and 11-12, they are objected to for being dependent on an objected claim.

In regard to claim 18, it is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 18 claims the same limitations as claim 16, from which claim 18 is dependent.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoshihiro (JP Patent 2000-227231).

In regard to claim 1, Yoshihiro teaches a centrifugal fan (10) (see Fig. 1 and Fig. 2) comprising an electric motor (6) having a rotary shaft (center axis through fan motor 6) (see Fig. 1), an impeller (7) coupled to said rotary shaft (see Abstract and Fig. 1). The phrase “for rotation therewith and configured to suck in air from a rotary shaft direction and blow air out in a direction that intersects a rotary shaft” (lines 4-5) is functional language that does not impart a structural limitation on the claimed invention. The impeller (7) including a main plate (8) (see Fig. 1 and Abstract) having a cooling air hole (through 11) spaced apart from said rotary shaft (see Fig. 2 and Fig. 3). Yoshihiro also teaches the impeller (7) having a plurality of blades (see Fig. 3 and Fig. 4) provided on the surface of said main plate (8) (see Fig. 3) on the side opposite said electric motor (6) (see Fig. 2), said plurality of blades radially outward from said cooling air hole (see Fig. 3).

Yoshihiro also teaches an air guide (13) coupled to said main plate (8) (see Fig. 3 and Fig. 4) for rotation therewith proximate to said cooling air hole (through 11). Lines 12-16 do not impart structural limitations on the centrifugal fan or air guide. The air guide must only be capable of directing the air to decrease velocity.

In regard to claim 2, Yoshihiro teaches a centrifugal fan (5) comprising a rotary shaft (center axis through fan motor 6 and impeller 7) (see Fig. 2), an electric motor (6) configured to rotate said rotary shaft (see Fig. 2 and para 2), a main

plate (8) having a cooling air hole (through 11) and being coupled to and rotationally driven by said rotary shaft (see Fig. 2 and Fig. 3 and Abstract), a plurality of blades (see Fig. 3 and Fig. 4) provided on the surface of said main plate (8) on a side opposite said electric motor (6) and radially outward from said cooling air hole (see Fig. 3 and Fig. 4). Lines 9-11 do not impart structural limitations on the centrifugal fan or air guide. The air guide must only be capable of directing the air to decrease velocity. Yoshihiro also teaches an air guide (13) coupled to said main plate (8) (see Fig. 3 and Fig. 4) for rotation therewith proximate to said cooling air hole (through 11). Lines 13-16 do not impart structural limitations on the centrifugal fan or air guide. The air guide must only be capable of directing the air to in a counter rotational direction.

In regard to claims 3 and 9, Yoshihiro teaches said air guide (13) is formed integrally with said main plate (8) as a single member (see Fig. 3).

In regard to claim 4, Yoshihiro teaches a cover (14) coupled to said rotary shaft for rotation with said main plate (8) that covers said cooling air hole from the side opposite the electric motor (6) and that is provided so that it rotates integrally with said main plate (8) (see Fig. 1 and Fig. 2 and para 22) wherein said air guide (13) is formed between said cover (14) and said main plate (8) (see Fig. 2 and Fig. 3).

In regard to claims 5 and 14, Yoshihiro teaches wherein said air guide (13) has a blade shape (see Fig. 4) inclined rearwards in the rotational direction of said cover (14). It is interpreted that a blade shape is a thin, flat part and inclined rearwards means it is away from the center of the rotary shaft.

In regard to claims 6 and 15, Yoshihiro teaches wherein said air guide (13) has a volute blade shape (see Fig. 4).

In regard to claims 7, 11-12 and 16-18, Yoshihiro teaches said air guide (13) is formed in said cover (14) (see Fig. 2 and Fig. 3).

In regard to claim 8, Yoshihiro teaches an air conditioner (see Fig. 1) comprising a centrifugal fan (5) (see Fig. 1 and para 2) having an electric motor (6) having a rotary shaft (center axis through fan motor 6 and impeller 7) (see Fig. 2 and para 2), an impeller (7) coupled to said rotary shaft (see Fig. 2). Lines 5-6 regarding sucking in air are functional and do not structurally limit the claimed subject matter. Yoshihiro also teaches the impeller (7) including a main plate (8) (see Fig. 1 and Abstract) having a cooling air hole (through 11) spaced apart from said rotary shaft (see Fig. 2 and Fig. 3). Yoshihiro also teaches the impeller (7) having a plurality of blades (see Fig. 3 and Fig. 4) provided on the surface of said main plate (8) (see Fig. 3) on the side opposite said electric motor (6) (see Fig. 2), said plurality of blades radially outward from said cooling air hole (see Fig. 3).

Yoshihiro also teaches an air guide (13) coupled to said main plate (8) (see Fig. 3 and Fig. 4) for rotation therewith proximate to said cooling air hole (through 11). Lines 14-15 do not impart structural limitations on the centrifugal fan or air guide. The air guide must only be capable of directing the air to decreased velocity.

Yoshihiro also teaches a heat exchanger (9) (see para 2 and Fig. 1) arranged on the outer peripheral side of said centrifugal fan (5) (see Fig. 1) and a casing (1,2 in combination) that houses said centrifugal fan (5) and said heat exchanger (9) (see Fig. 1 and para 14).

In regard to claims 10 and 13, Yoshihiro teaches a centrifugal fan (5) comprising a rotary shaft (center axis through fan motor 6 and impeller 7) (see Fig. 2), an electric motor (6) configured to rotate said rotary shaft (see Fig. 2 and para 2), a main plate (8) having a cooling air hole (through 11) and being coupled to and rotationally driven by said rotary shaft (see Fig. 2 and Fig. 3 and Abstract), a plurality of blades (see Fig. 3 and Fig. 4) provided on the surface of said main plate (8) on a side opposite said electric motor (6) and radially outward from said cooling air hole (see Fig. 3 and Fig. 4). Lines 9-11 do not impart structural limitations on the centrifugal fan or air guide. The air guide must only be capable of directing the air to decrease velocity. Yoshihiro also teaches an air guide (13) coupled to said main plate (8) (see Fig. 3 and Fig. 4) for rotation therewith proximate to said cooling air hole (through 11). Lines 13-16 do not impart structural limitations on the centrifugal fan or air guide. The air guide must only be capable of directing the air to in a counter rotational direction.

Yoshihiro also teaches a heat exchanger (9) (see para 2 and Fig. 1) arranged on the outer peripheral side of said centrifugal fan (5) (see Fig. 1) and a casing (1,2

in combination) that houses said centrifugal fan (5) and said heat exchanger (9) (see Fig. 1 and para 14).

Response to Arguments

2. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emily Iris Nalven whose telephone number is (571)272-3045. The examiner can normally be reached on Monday - Thursday 8 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisors, Cheryl J. Tyler can be reached on 571-272-4834 or Frantz Jules can be reached on 571-272-6681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Emily Iris Nalven
April 30, 2008
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Examiner, Art Unit 3744

/Frantz F. Jules/
Supervisory Patent Examiner, Art Unit 3744